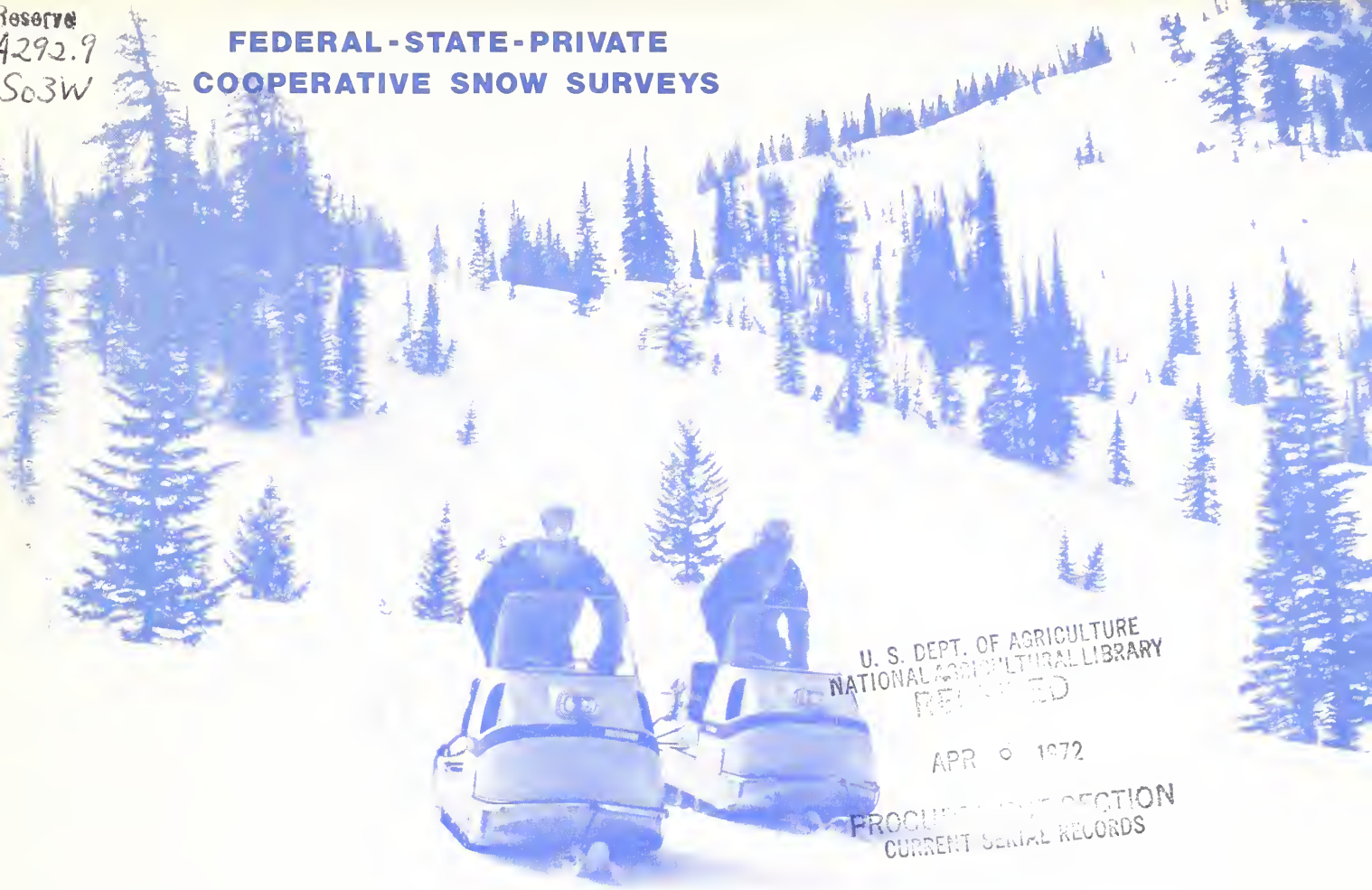
FEDERAL-STATE-PRIVATE
COOPERATIVE SNOW SURVEYS



WATER SUPPLY OUTLOOK FOR WESTERN UNITED STATES

Including Columbia River Drainage in Canada

Prepared by

U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with
CALIFORNIA DEPARTMENT of WATER RESOURCES
and
BRITISH COLUMBIA DEPARTMENT of
LANDS, FORESTS and WATER RESOURCES

AS OF
MAR. 1, 1972

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters of key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO NUMBER ORC 221-3

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

USDA-SCS-PORTLAND, OREG. 1970

WATER SUPPLY OUTLOOK FOR WESTERN UNITED STATES

Including Columbia River Drainage in Canada

ISSUED

MARCH 1, 1972

The Soil Conservation Service coordinates snow surveys conducted by its staff and many cooperators, including the Bureau of Reclamation, Corps of Engineers, Forest Service, National Park Service, NOAA, National Weather Service, Geological Survey, and other Federal Agencies, Departments of State Government, Irrigation Districts, Power Companies, and others.

The Department of Water Resources coordinates snow surveys in California.

The Water Resources Service, Department of Lands, Forests, and Water Resources directs snow surveys in British Columbia.

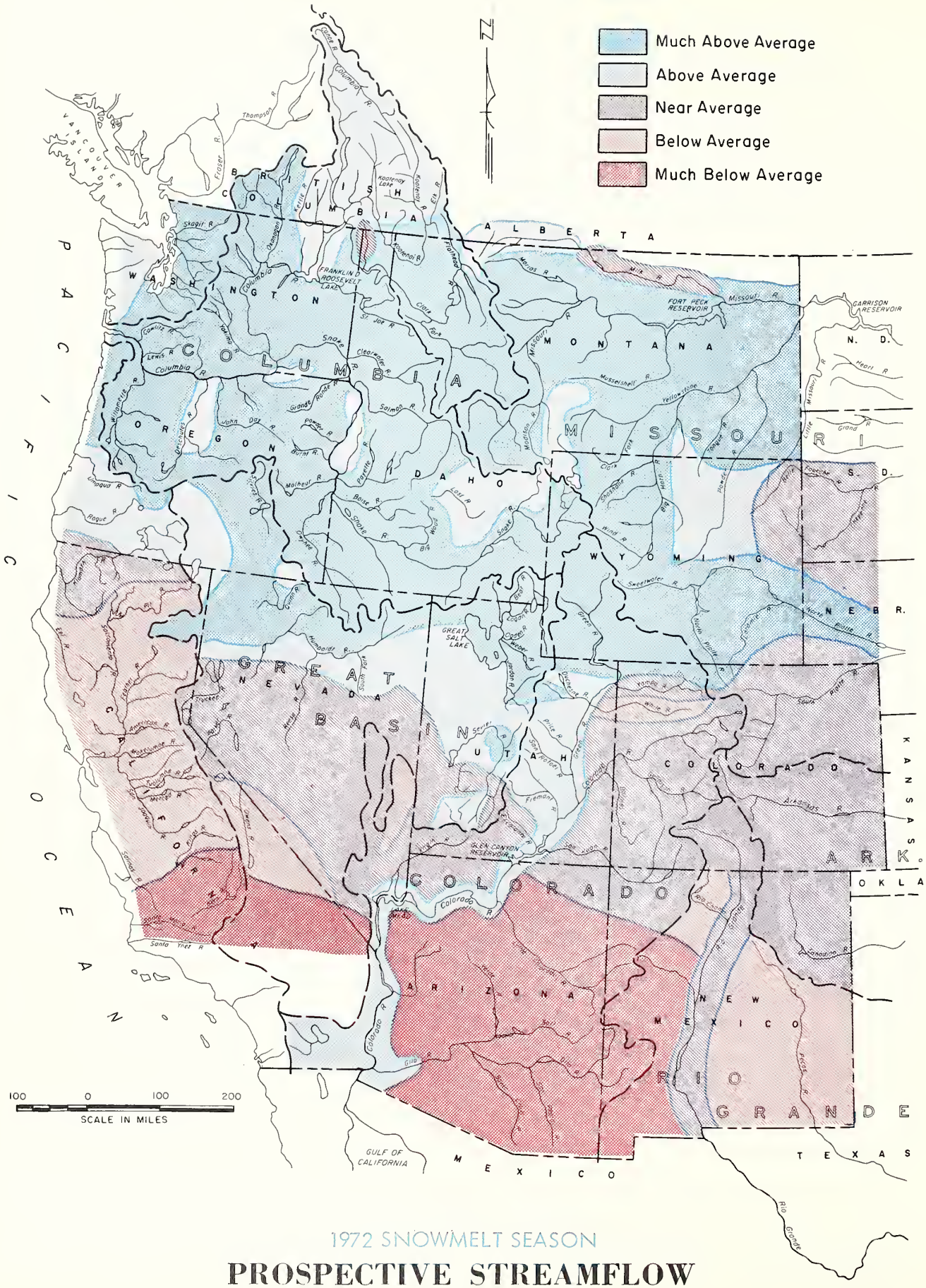
This report was prepared by the Water Supply Forecasting Unit, Engineering Division, Soil Conservation Service, from data supplied by Snow Survey Supervisors of the Soil Conservation Service in the States of Alaska, Arizona, Colorado and New Mexico, Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming.

Data from California was supplied by the Chief, Water Supply Forecast and Snow Survey Unit, Department of Water Resources.

Data from British Columbia was supplied by the Chief, Hydrology Division, Water Investigations Branch, Department of Lands, Forests and Water Resources.

USDA-SCS-PORTLAND, OREG. 1971 M7-0-22030-B

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
KENNETH E. GRANT, ADMINISTRATOR



1972 SNOWMELT SEASON

PROSPECTIVE STREAMFLOW

AS OF MARCH 1, 1972

USDA SCS-PORTLAND, OREG. 1971 M7-0-2203-0-C1-L

WATER SUPPLY OUTLOOK

1972 SNOWMELT SEASON
MARCH 1, 1972

WESTERN SNOWPACKS RANGE FROM A THIRD OF USUAL AMOUNTS IN ARIZONA TO OVER TWICE NORMAL IN PARTS OF THE CASCADES AND NORTHERN ROCKIES. GENERALLY EXCELLENT RESERVOIR STORAGE WATER SUPPLEMENTS STREAMFLOW PROSPECTS TO PROVIDE AN ADEQUATE TO EXCELLENT WATER SUPPLY OUTLOOK FOR MOST IRRIGATED AREAS. HIGH WATER POTENTIAL EXISTS ON MANY STREAMS OF THE COLUMBIA, MISSOURI, GREEN AND NORTHERN GREAT BASIN. MINOR IRRIGATION SHORTAGES EXPECTED IN ARIZONA, NEW MEXICO AND SOUTHERN CALIFORNIA.

Mountain snowfall during February was generally average or well above on most of the main water producing areas of the Columbia and Missouri basins, and along the northern edge of the Great Basin. South of here precipitation decreased rapidly, continuing the dry weather of January. In Southern California there has only been one day of measurable precipitation since Christmas, while Arizona reports the driest January-February period in sixty years.

Snowpacks which rank among the highest few years of record now lie on many watersheds of Washington, Oregon, Idaho, Montana, western Wyoming and along the northern edge of Utah and Nevada. Almost every snow course in the Montana portion of the Columbia Basin is record high. Snow is also record high in many areas of Washington, Oregon and Idaho.

Snow in the Columbia Basin ranges from about 130 to 200 percent of normal, and is near 160 percent for the Basin as a whole. While forecasts for most streams in this Basin range from 20 to 50 percent above normal, in parts of eastern Oregon and southern Idaho they range as high as twice normal.

As an example of the high flows anticipated, the forecast for the Kootenai River at Libby, Montana is for the highest flow since the record began in 1911. This year's flow of the Columbia at The Dalles, Oregon is expected to be similar to, but a little greater than, the volume of runoff experienced in 1948 and 1956. It will be second only to the giant flow of 1894. However, available reservoir storage is now greater than it was in earlier years and will be used by management agencies to lower the peak flow. Forecasts assume subsequent weather conditions will be near normal.

In contrast to the above, snow cover in Arizona varies from 21 percent on the Verde River to 58 percent on the Little Colorado. Stream forecasts range from a low of 17 percent for the Tonto River to 55 percent for the Gila River at the head of Safford Valley. Reservoir storage is near average and will provide adequate supplies in all areas served by them. Water supply will be somewhat short along the upper Gila.

In New Mexico, forecasts range from 25 percent on the Mimbres, 85 percent on the Pecos, Rio Chama and Costillo Creek, to 97 percent on the Rio Grande at Otowi Bridge. Storage in Elephant Butte Reservoir is 60 percent average. It is also poor on the Pecos River.

The California Department of Water Resources reports that the 1972 snowmelt season is shaping into a repeat of the water supply conditions experienced during the past two years. Snowmelt runoff forecasts generally exaggerate the State's natural maladjustment of water supply, ranging from near normal for southern Cascade and central Sierra watersheds to below 50 percent of normal for southern Sierra watersheds. South of the Tehachapi Mountains, conditions are generally dry.

In contrast to recent years in which snowpacks have been light in Canada when they were heavy in the United States portion of the Columbia Basin, this year they are very heavy. The British Columbia Water Resources Service, Department of Lands, Forests and Water Resources reports that the snowpack ranges from 140 to 160 percent of average on the upper Columbia, east Kootenai, Okanogan and Similkameen watersheds. The snow ranges between 125 and 135 percent on the Kettle, lower Columbia and west Kootenai rivers.

In the Missouri Basin a maximum of record snowpack on many watersheds indicates record or near record volumnes of water will come from the Sun, Marias, Teton, St. Mary, Smith and Judith rivers. Although below previous records heavy runoff is expected from the Jefferson, Madison, Yellowstone and Bighorn rivers.

In Wyoming the snow equals or exceeds last

SUMMARY OF SNOW WATER EQUIVALENT MEASUREMENTS

MARCH 1, 1972

MAJOR BASIN AND SUB—WATERSHED	WATER EQUIVALENT IN PERCENT OF: LAST YEAR	AVERAGE
MISSOURI BASIN		
Jefferson	108	158
Madison	98	136
Gallatin	83	117
Missouri Main Stem	127	171
Yellowstone	110	138
Shoshone	104	149
Wind	107	167
North Platte	79	120
South Platte	87	106
ARKANSAS BASIN		
Arkansas	100	103
Cucharas-Purgatoire	115	94
RIO GRANDE BASIN		
Rio Grande (Colo.)	123	101
Rio Grande abv. Otowi Bridge	126	68
Pecos	233	44
COLORADO BASIN		
Green (Wyo.)	104	155
Yampa - White	82	100
Duchesne	105	129
Price	102	123
Upper Colorado	85	109
Gunnison	100	100
San Juan	113	93
Dolores	88	97
Virgin	101	112
Gila	152	37
Salt	115	34
GREAT BASIN		
Bear	97	162
Logan	94	138
Ogden	102	152
Weber	106	133
Provo - Utah Lake	100	177
Jordan	114	132
Sevier	98	114
Walker - Carson	103	108
Tahoe - Truckee	112	112
Humboldt	146	136
Lake Co. (Oregon)	175	160
Harney Basin (Oregon)	160	150
UPPER COLUMBIA BASIN		
Columbia (Canada)	120	134
Kootenai	136	158
Clark Fork	135	165
Bitterroot	112	136
Flathead	134	160
Spokane	130	150
Okanogan	135	155
Methow	120	173
Chelan	115	152
Wenatchee	140	210

MAJOR BASIN AND SUB—WATERSHED	WATER EQUIVALENT IN PERCENT OF: LAST YEAR	AVERAGE
SNAKE BASIN		
Snake above Jackson, Wyo.	102	143
Snake above Hiese, Idaho	102	148
Snake abv. American Falls Res.	105	147
Henry's Fork	95	135
Southern Idaho Tributaries	135	190
Big and Little Wood	85	127
Boise	115	165
Owyhee	235	175
Payette	100	145
Malheur	130	135
Weiser	105	150
Burnt	135	155
Powder	115	145
Salmon	105	145
Grande Ronde	145	150
Clearwater	140	165
LOWER COLUMBIA BASIN		
Yakima	159	191
Umatilla	260	195
John Day	160	160
Deschutes - Crooked	130	160
Hood	130	175
Willamette	125	190
Lewis	112	185
Cowlitz	125	194
PACIFIC COASTAL BASIN		
Puget Sound	150	187
Olympic Peninsula	123	145
Umpqua - Rogue	130	150
Klamath	130	130
Trinity	95	100
CALIFORNIA CENTRAL VALLEY		
Upper Sacramento	105	117
Feather	80	108
Yuba	95	113
American	95	113
Mokelumne	95	108
Stanislaus	90	99
Tuolumne	95	95
Merced	95	99
San Joaquin	85	81
Kings	80	78
Kaweah	85	67
Tule	70	55
Kern	70	57

Data for California Watersheds supplied by Dept. of Water Resources, and for British Columbia Watersheds by Dept. of Lands, Forests and Water Resources.

Average is for 1953-67 *period.* California averages are for the period 1931-70.
Based on Selected Snow Courses determined by Distribution within the Basin, Length of Record and Repetitive Monthly Measurement Schedules.

year's heavy snowpack except on the North Platte and in the Black Hills of the Wyoming-South Dakota area. It is average in the Black Hills. On the North Platte the snow is still heavy enough to indicate prospective streamflow in the range of 120 to 140 percent. Moving south of the North Platte, all streams in Colorado are expected to produce within 15 percent of average amounts.

In the Upper Colorado River Basin snow cover varies from a low of 7 percent below average on the San Juan River to 55 percent above normal on the upper Green River. With inflow to Lake Powell for the April-July period forecast at 114 percent, prospects for water and power interests in the Lower Basin are satisfactory.

In the Great Basin this year's near normal to well above normal snowpack should produce an adequate water supply in southern and western sections. A high water potential exists on many watersheds along the northern edge of the Basin - in Oregon, along northern tributaries to the Humboldt River, and in Utah from about the Utah Lake area northward. Reservoir storage is excellent throughout the Basin.

Although February snowfall was very light in most parts of Alaska, the pack remains near normal or above in most areas. High flows are expected from the Chena, Salcha, Susitna and Tanana rivers, as well as from streams in southeast Alaska.

MISSOURI BASIN

A maximum of record snowpack now lies on most of the snow courses in the Sun-Marias-Teton area, on the Missouri main stem and the western portion of the Jefferson River drainage. The snow on these watersheds is generally in the range of 160 to 175 percent of usual amounts. Elsewhere in Montana snows range from a little above average in the lower Gallatin drainage, Bear Paw, Big Snowy and Crazy mountains to near 140 percent on the Madison and most of the Yellowstone drainages.

Streamflow forecasts in Montana are for record or near record volumes of water from the Sun, Marias, Teton, St. Mary, Smith and Judith drainages. Streamflow volumes will be large from the Jefferson and Madison rivers, but below previous records. Flow of the Bighorn River and the Yellowstone River above the Bighorn River is expected to be near the large volume measured last year. Below the confluence of the river the volume of runoff is forecast to be about the fourth largest of record. Forecasts for most Montana streams range between about 135 and 190 percent of usual amounts.

To the south in Wyoming the snowpack continues well above average. It equals or exceeds last year's heavy snowpack on the upper Yellowstone, Clark's Fork, Shoshone, Wind and Big Horn mountains. It ranges from 135 percent in the Big Horns to 167 percent on the Wind River. Streams draining from the Big Horn Mountains are expected to yield near 125 percent of average flows, while flow of the Wind, Shoshone, Clark's Fork and the Big Horn rivers will range from near 130 to 155 percent average.

Snow in the Black Hills of Wyoming and South Dakota is average. Storage in Belle Fourche reservoir is 180 percent of average, improving water prospects here.

Light snowfall during February on the headwaters of the North Platte River has substantially reduced expected summer flows in this area. However, forecast flows still range from 120 percent for the Laramie near Glendevery to 133 percent for the North Platte at Saratoga and 140 percent for Encampment near Encampment.

Although February snowfall was somewhat less than normal on the South Platte, tributary streams are still expected to yield from 5 to 15 percent above average flows. With storage in the South Platte reservoirs at 31 percent above average, water users have prospects of a good year.

The heavy snowpacks and excellent reservoir storage provide prospects of excellent water supplies next summer in Montana and Wyoming.

ARKANSAS BASIN

The dry, warm weather of February has reduced last month's favorable snow conditions until now the snowpack is essentially average for this time of year. Assuming average snowfall and spring rains during the remainder of the season, the Arkansas River at Salida is expected to yield about 6 percent less than normal flow. Outlook for the Purgatoire is similar at 7 percent below normal, while on the Cucharas it is more favorable at 17 percent above the usual amount. Flow of the Canadian River should be near, but a little below average.

Storage in John Martin Reservoir on the Arkansas River remains unfavorable, with only 27 percent of average. On the river as a whole it is about 71 percent. In New Mexico on the Canadian River, storage in Conchas Reservoir is 48 percent of average.

Considerably more snow is needed to insure an adequate water supply during the coming summer.

RIO GRANDE BASIN

The snowpack is average on the Rio Grande watersheds in Colorado, but drops off sharply in New Mexico. It is only 68 percent on the Rio Grande above Otowi Bridge and drops to 44 percent average on the Pecos River. The low snowfall and warm temperatures of the past

SELECTED STREAMFLOW FORECASTS MARCH 1, 1972

STREAM AND STATION	FORECASTS THIS YEAR		Forecast Period	Last Year's
	Flow In (1,000 A.F.)	Percent of Average		Flow In (1,000 A.F.)
SASKATCHEWAN				
St. Mary near Babb, Montana 1/	595	121	April-Sept.	
UPPER MISSOURI				
Beaverhead near Grant, Montana 2/	180	170	April-Sept.	297
Big Hole near Melrose, Montana	970	140	April-Sept.	
Jefferson at Sappington, Montana	1,440	152	April-Sept.	
Madison near Grayling, Montana 3/	640	149	April-Sept.	686
Gallatin near Gateway, Montana	567	123	April-Sept.	731
Sun at Gibson Dam, Montana 4/	810	134	April-Sept.	746
Belt near Monarch, Montana	205	188	April-Sept.	
Marias near Shelby, Montana 5/	860	142	April-Sept.	602
Missouri near Landusky, Montana 6/	6,650	153	April-Sept.	
near Williston, North Dakota 7/	16,800	153	April-Sept.	
S. Fk. Musselshell above Martinsdale, Montana	80	173	April-Sept.	
Milk at Eastern Crossing, Montana	297	106	March-Sept.	
Yellowstone at Yellowstone Lake Outlet, Wyo.	1,000	120	April-Oct.	1,217
at Corwin Springs, Montana	2,600	138	April-Sept.	2,689
at Miles City, Montana 8/	8,350	143	April-Sept.	
Clarks Fork near Belfry, Montana	820	140	April-Sept.	
Shoshone below Buffalo Bill Res., Wyo. 9/	1,055	130	April-Sept.	1,150
Wind near Dubois, Wyoming	134	135	April-Sept.	144
at Riverton, Wyoming 10/	892	137	April-Sept.	
below Boysen Res., Wyoming 11/	1,058	140	April-Sept.	
Bull Lake Creek above Bull Lake, Wyoming	245	138	April-Sept.	248
Little Popo Agie near Lander, Wyoming	66	155	April-Sept.	73
Tensleep near Tensleep, Wyoming	90	122	April-Sept.	88
Medicine Lodge near Hyattville, Wyoming	24	120	April-Sept.	21.0
Shell Creek near Shell, Wyoming	82	125	April-Sept.	
Big Horn near St. Xavier 8/	2,500	145	April-Sept.	2,415
Tongue near Dayton, Wyoming	129	125	April-Sept.	112
No. Fork Powder near Hazelton, Wyoming	11.7	126	April-Sept.	10.8
PLATTE				
North Platte at Saratoga, Wyoming	740	133	April-Sept.	1,010
Encampment near Encampment, Wyoming	178	140	April-Sept.	221
Laramie near Glendevey, Colorado 12/	73	120	April-Sept.	
Big Thompson at Drake, Colorado 13/	110	110	April-Sept.	
Clear at Golden, Colorado 14/	130	109	April-Sept.	
St. Vrain at Lyons, Colorado 15/	80	114	April-Sept.	
Cache La Poudre near Fort Collins, Colorado 16/	225	105	April-Sept.	
ARKANSAS				
Arkansas at Salida, Colorado 17/	290	94	April-Sept.	
Cucharas near LaVeta, Colorado	14	117	April-Sept.	
Purgatoire at Trinidad, Colorado	43	93	April-Sept.	
RIO GRANDE				
Rio Grande near Del Norte, Colorado 18/	460	105	April-Sept.	
at Otowi Bridge, New Mexico 19/	500	97	March-July	
Conejos near Mogote, Colorado 20/	165	91	April-Sept.	
El Vado Res., Inflow, New Mexico	160	85	March-July	
Pecos at Pecos, New Mexico	35	85	March-July	
UPPER COLORADO				
Colorado, Grandby Res. Inflow, Colorado 21/	225	103	April-Sept.	
near Dotsero, Colorado 22/	1,450	105	April-Sept.	
near Cameo, Colorado 23/	2,200	99	April-Sept.	
near Cisco, Utah 24/	2,872	102	April-July	
Lake Powell Inflow, Arizona 25/	7,444	114	April-July	8,378
Roaring Fork at Glenwood Springs, Colorado 26/	725	105	April-Sept.	
Uncompahgre at Colona, Colorado	115	89	April-Sept.	

Forecasts in California provided by Department of Water Resources.
Average is for 1953–67 period except California. California is computed for 1916–65 period.
Forecasts assume average Effective Climate Conditions from Date Through Snow Melt Seasan.

Explanatory Notes on Forecasts listed on Inside Back Cover.

SELECTED STREAMFLOW FORECASTS MARCH 1, 1972

STREAM AND STATION	FORECASTS THIS YEAR		Forecast Period	Last Year's
	Flow In (1,000 A.F.)	Percent of Average		Flow In (1,000 A.F.)
UPPER COLORADO (continued)				
Gunnison, Blue Mesa Res. Inflow, Colorado 27/	740	96	April-Sept.	
near Grand Junction, Colorado 28/	1,150	101	April-Sept.	
Dolores at Dolores, Colorado	225	97	April-Sept.	
Green at Warren Bridge, Wyoming	435	135	April-Sept.	452
at Green River, Wyoming 29/	1,455	155	April-Sept.	
Flaming Gorge Res. Inflow, Utah 27/	1,670	158	April-July	1,905
at Green River, Utah 30/	3,228	125	April-July	
North Piney at Mason, Wyoming	52	152	April-Sept.	67
Big Sandy near Big Sandy, Wyoming	85	160	April-Sept.	69
Yampa at Steamboat Springs, Colorado	260	100	April-Sept.	
near Maybell, Colorado	850	100	April-Sept.	
Little Snake near Dixon, Wyoming	350	135	April-Sept.	486
White near Meeker, Colorado	250	85	April-Sept.	
Strawberry at Duchesne, Utah 40/	70	143	April-July	
Duchesne near Tabiona, Utah 31/	119	127	April-July	
at Randlett, Utah 40/	320	122	April-July	
Lakefork below Moon Lake, Utah 32/	75	114	April-July	
Uinta near Neola, Utah	95	120	April-July	
Whiterocks near Whiterocks, Utah	60	118	April-July	
Price, Scofield Res. Inflow, Utah 33/	40	125	April-July	
Cottonwood near Orangeville, Utah 34/	53	120	April-July	
San Juan, Navajo Res. Inflow, New Mexico 27/	600	97	April-July	
near Bluff, Utah 35/	932	105	April-July	
Animas at Durango, Colorado	460	112	April-Sept.	
Lower Colorado				
Virgin near Virgin, Utah	38	100	April-June	
Little Colorado above Lyman, Arizona	2.4	31	March-June	0.9
Gila near Solomon, Arizona	40	55	March-May	12.0
Frisco at Clifton, Arizona	20	52	March-May	7.5
Salt at Intake, Arizona	75	37	March-May	43
Tonto above Roosevelt, Arizona	4	17	March-May	2.9
Verde above Horseshoe Dam, Arizona	38	36	March-May	37
GREAT BASIN				
Bear at Utah-Wyo. State Line	141	133	April-July	138
at Harer, Idaho	420	186	April-Sept.	
Smith's Fork near Border, Wyoming	158	146	April-Sept.	198
Thomas Fork near Wyo.-Ida. State Line	51	162	April-Sept.	70
Logan near Logan, Utah 36/	148	149	April-July	203
Ogden, Pine View Res. Inflow, Utah 27/	172	191	April-June	160
Weber near Oakley, Utah	119	128	April-June	124
Provo near Hailstone, Utah 37/	138	159	April-July	
Strawberry Res. Inflow, Utah	60	146	April-July	
Utah Lake Net Inflow, Utah	274	141	April-July	241
Big Cottonwood near Salt Lake City, Utah	43	126	April-July	41
Beaver near Beaver, Utah	20	106	April-July	19.4
Sevier near Hatch, Utah	42	127	April-July	
near Gunnison, Utah	42	135	April-July	
So. Fork Humboldt near Elko, Nevada	75	129	April-July	135
Humboldt at Palisades, Nevada	201	131	April-July	462
Truckee at Farad, California 38/	240	93	April-July	380
East Carson near Gardnerville, Nevada	155	89	April-July	204
West Carson at Woodsfords, California	48	94	April-July	63
East Walker near Bridgeport, California 39/	51	85	April-August	76
West Walker near Coleville, California	130	90	April-July	150
Donner und Blitzen near Frenchglen, Oregon	95	167	March-July	
Silvies near Burns, Oregon	175	173	March-July	
Chewaucan near Paisley, Oregon	100	113	March-July	
Deep above Adel, Oregon	89	125	March-July	
Bidwell near Ft. Bidwell, California	19.5	169	April-July	24.2

Forecasts in California provided by Department of Water Resources.
Average is for 1953-67 period except California. California is computed for 1916-65 period.
Forecasts assume average Effective Climate Conditions from Date Through Snow Melt Season.

Explanatory Notes on Forecasts listed on Inside Back Cover.

SELECTED STREAMFLOW FORECASTS MARCH 1, 1972

STREAM AND STATION	FORECASTS THIS YEAR		Forecast Period	Last Year's Flow In (1,000 A.F.)
	Flow In (1,000 A.F.)	Percent of Average		
UPPER COLUMBIA				
Columbia at Revelstoke, British Columbia				
at Birchbank, British Columbia 40/	53,800	116	April-Sept.	48,592
at Grand Coulee, Washington 40/	87,400	126	April-Sept.	75,360
Kootenai at Libby, Montana	10,450	130	April-Sept.	8,966
at Leonia, Idaho	12,100	132	April-Sept.	10,484
Blackfoot near Bonner, Montana	1,410	140	April-Sept.	1,283
So. Fk. Flathead nr Columbia Falls, Montana 40/	3,250	138	April-Sept.	2,816
Flathead at Columbia Falls, Montana 40/	8,600	133	April-Sept.	7,498
near Polson, Montana 40/	10,400	135	April-Sept.	9,382
Clark Fork above Missoula, Montana	2,580	146	April-Sept.	1,980
near Plains, Montana 40/	18,000	145	April-Sept.	15,439
at Whitehorse Rapids, Idaho	20,000	143	April-Sept.	
Bitterroot near Darby, Montana	855	153	April-Sept.	780
Priest near Priest River, Idaho 41/	940	103	April-July	
Pend Oreille below Box Canyon, Washington	22,450	140	April-Sept.	
Kettle near Laurier, Washington	2,150	112	April-Sept.	
Spokane at Post Falls, Idaho 42/	4,300	137	April-Sept.	3,907
Similkameen near Nighthawk, Washington	2,070	136	April-Sept.	
Okanogan near Tonasket, Washington	2,455	141	April-Sept.	
Methow near Pateros, Washington	1,480	140	April-Sept.	
Stehekin at Stehekin, Washington	1,220	135	April-Sept.	
Chelan at Chelan, Washington 43/	1,710	135	April-Sept.	
Wenatchee at Peshastin, Washington	2,590	143	April-Sept.	
SNAKE				
Snake above Palisades Res., Wyoming 44/	3,580	140	April-Sept.	4,048
near Heise, Idaho 45/	5,100	136	April-Sept.	6,267
near Blackfoot, Idaho 46/	5,190	134	April-July	
at Weiser, Idaho	8,380	133	April-Sept.	
Grey's above Palisade, Wyoming	520	143	April-Sept.	634
Salt above Palisade, Wyoming	460	143	April-Sept.	700
Henry's Fork near Ashton, Idaho 47/	730	120	April-Sept.	
Teton near St. Anthony, Idaho	500	127	April-Sept.	
Blackfoot Reservoir Inflow, Idaho	160	157	April-Sept.	
Big Lost near MacKay, Idaho 48/	205	122	April-Sept.	
Portneuf at Topaz, Idaho	115	145	March-Sept.	
Salmon Falls Creek nr San Jacinto, Idaho	120	172	March-Sept.	
Big Wood, Inflow to Magic Res., Idaho 49/	420	160	April-Sept.	616
Bruneau near Hot Springs, Idaho	320	168	March-Sept.	
Boise near Boise, Idaho 50/	2,300	148	April-Sept.	2,610
Jordan near Jordan Valley, Oregon	120	141	April-July	
Owhyee near Owyhee, Nevada 51/	110	183	April-July	124
Owyhee Res. Net Inflow, Oregon 27/	700	190	March-July	696
Malheur near Drewsey, Oregon	158	170	March-July	
Payette near Horseshoe Bend, Idaho 52/	2,430	132	April-Sept.	2,891
Weiser above Crane Creek, Idaho 40/	630	125	March-Sept.	
Burnt near Hereford, Oregon 40/	71	168	March-July	
Powder near Center, Oregon	81	150	April-July	
Eagle above Skull Creek, Oregon	209	124	April-July	
Imnaha at Imnaha, Idaho	361	118	April-Sept.	
Salmon at Whitebird, Idaho	9,600	140	April-Sept.	10,398
Lostine near Lostine, Oregon	148	119	April-Sept.	
Grand Ronde at LaGrande, Oregon	296	143	March-July	220
Clearwater at Spalding, Idaho	12,000	140	April-Sept.	10,707
LOWER COLUMBIA				
Yakima at CleElum, Washington 53/	1,350	139	April-Sept.	
near Parker, Washington 54/	2,850	164	April-Sept.	
Naches near Naches, Washington 55/	1,330	148	April-Sept.	
Walla Walla, So. Fk. near Milton, Oregon	91	115	March-Sept.	

Forecasts in California provided by Department of Water Resources.
Average is for 1953–67 period except California. California is computed for 1916–65 period.
Forecasts assume average Effective Climate Conditions from Date Through Snow Melt Season.

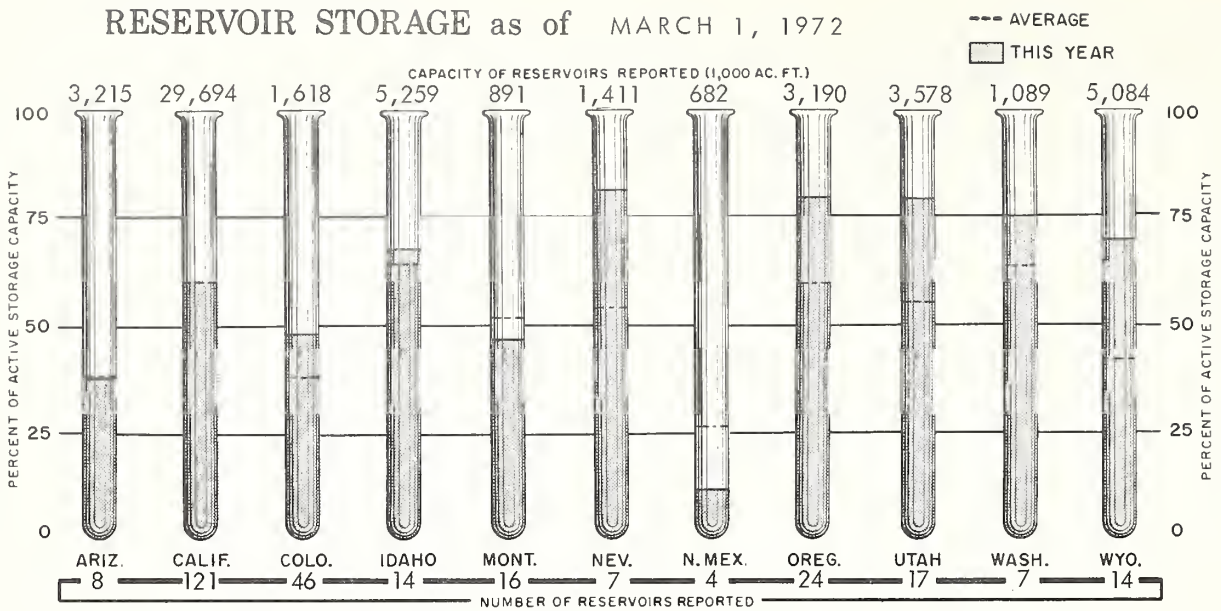
Explanatory Notes on Forecasts listed on Inside Back Cover.

SELECTED STREAMFLOW FORECASTS MARCH 1, 1972

STREAM AND STATION	FORECASTS THIS YEAR		Forecast Period	Last Year's
	Flow In (1,000 A.F.)	Percent of Average		Flow In (1,000 A.F.)
LOWER COLUMBIA (continued)				
Umatilla at Pendleton, Oregon	272	131	March-Sept.	191
John Day, Middle Fork at Ritter, Oregon	190	141	March-July	
North Fork at Monument, Oregon	993	146	March-July	
Crooked near Post, Oregon	237	169	March-July	
Deschutes at Benham Falls, Oregon 40/	478	122	April-July	
Columbia at The Dalles, Oregon 40/	135,500	129	April-Sept.	123,427
Hood near Tucker Bridge, Oregon 40/	367	130	April-July	
McKenzie near Vida, Oregon	1,431	132	April-July	
Santiam, South, at Waterloo, Oregon	753	126	April-July	
North, at Mehama, Oregon 40/	1,040	130	April-July	
Clackamas at Estacada, Oregon	860	125	April-July	
Willamette at Salem, Oregon 40/	5,858	125	April-July	
Lewis at Ariel, Washington 56/	1,950	144	April-Sept.	
Cowlitz at Castle Rock, Washington 57/	4,100	145	April-Sept.	
NORTH PACIFIC COASTAL				
Dungeness near Sequim, Washington	200	116	April-Sept.	
Umpqua, No., near Tokatee Falls, Oregon 40/	200	114	April-July	
Rogue at Raygold, Oregon	1,064	113	April-Sept.	1,303
Klamath Lake, Net Inflow, Oregon	758	108	March-July	981
Trinity at Lewiston, California	600	97	April-July	734
CALIFORNIA CENTRAL VALLEY 40/				
Sacramento, Inflow to Shasta, California	1,720	97	April-July	2,332
Feather near Oroville, California	1,500	81	April-July	2,701
Yuba at Smartville, California	1,020	95	April-July	1,387
American, Inflow to Folsom Res., Calif.	1,200	91	April-July	1,445
Cosumnes at Michigan Bar, California	125	86	April-July	123
Mokelumne, Inflow to Pardee Res., Calif.	440	95	April-July	490
Stanislaus, Inflow to Melones Res., Calif.	610	85	April-July	665
Tuolumne, Inflow to Don Pedro Res., Calif.	1,000	84	April-July	1,058
Merced, Inflow to Exchequer Res., Calif.	470	77	April-July	502
San Joaquin, Inflow to Millerton Lake, Calif.	885	74	April-July	970
Kings, Inflow to Pine Flat Res., California	830	71	April-July	820
Kaweah, Inflow to Terminus Res., California	160	59	April-July	196
Tule, Inflow to Success Res., California	20	34	April-July	37
Kern, Inflow to Isabella Res., California	185	44	April-July	230
ALASKA				
Chena at Fairbanks, Alaska	725	164	May-June	658
Salcha near Salchaket, Alaska	878	145	May-June	878

Forecasts in California provided by Department of Water Resources.
Average is for 1953–67 period except California. California is computed for 1916–65 period.
Forecasts assume average Effective Climate Conditions from Date Through Snow Melt Season.

Explanatory Notes on Forecasts listed on Inside Back Cover.



month have caused considerable snowmelt, particularly on south facing slopes.

Although surface soils in New Mexico have been drying out up to the snow line, subsoil moisture is still good. Because of the early melt, soil moisture is good at the higher elevations and good water yields could result if the present dry trend is reversed and good storms come in the next month to six weeks.

Flow of the Rio Grande near Del Norte, Colorado is expected to be about 5 percent more than usual. Inflow to the river system is expected to be about 10 percent below average from the Conejos River and 15 percent below from the Chama River. Surface runoff water supplies on the Pecos River are expected to be comparable, with a forecast of 85 percent of average.

The effect of last year's low runoff is reflected in this year's poor carryover reservoir storage. Storage in Elephant Butte Reservoir is 60 percent average. Storage is also poor on the Pecos River.

COLORADO BASIN

While the present snow cover in the upper Colorado River Basin is still on the favorable side as a whole, it shows considerable variability within the Basin. Snow cover is heaviest on tributaries to the Green River in Wyoming where conditions equal or slightly exceed those of last year. The snowpack on this basin is now 155 percent of the usual amount. From here it decreases to near 120 to 130 percent on the Utah tributaries. In Colorado the snow drops even further. Here it varies from 7 percent below average on the San Juan River to 9 percent above on the main headwaters of the upper Colorado.

Snow cover for the entire upper Colorado Basin is 15 percent more than the normal amount.

Soil moisture conditions are near average or above on most watersheds. This, combined with present snowpack conditions, provides an adequate to good outlook for the coming summer. At present the lowest streamflow forecast is for the White River near Meeker, Colorado where prospective flow is 85 percent.

The heavy snows on the upper Green River are expected to yield an April-July inflow to Flaming Gorge Reservoir of 1,670,000 acre-feet, or 158 percent of the average amount. Since contributions from the Yampa, White and Duchesne rivers will be considerably lower percentagewise, flow of the Green at Green River, Utah is expected to be 125 percent average. Forecast for the Colorado near Cisco, Utah is 102 percent, while the San Juan near Bluff, Utah has a similar forecast at 105 percent. Combining the above forecasts indicates an April-July inflow to Lake Powell of 7,444,000 acre-feet, or 114 percent average.

In the Lower Colorado Basin the Virgin River is now expected to yield an average flow. In Arizona spring runoff will be much below normal this year. Water supplies are near normal due to good storage in the major reservoirs.

With no significant precipitation in over two months (Arizona's driest January-February period in sixty years) and warm temperatures, the snow cover has declined until there is virtually no snow left on the Verde Watershed

STORAGE IN LARGE RESERVOIRS MARCH 1, 1972

BASIN AND NAME OF RESERVOIR	CAPACITY (1,000 A.F.)	STORAGE (1,000 A.F.)	STORAGE PERCENT AVERAGE
UPPER MISSOURI			
Belle Fourche	185	147	180
Boysen	550	350	90
Buffalo Bill	373	196	140
Canyon Ferry	2,043	1,594	102
Fort Peck	19,410	16,180	149
Garrison	24,790	19,201	180
Hebgen	377	250	146
Keyhole	192	178	507
Lake Francis Case	5,816	3,864	114
Lake Sharp	1,900	1,739	105
Oahe	23,630	18,094	156
Tiber	1,347	487	78
Big Horn	1,356	922	157
PLATTE			
City of Denver (5)	507	433	112
Colo-Big Thompson (3)	718	545	137
Glendo	784	434	138
Pathfinder	1,016	920	242
Seminoe	1,010	627	197
ARKANSAS			
Conchas	273	79	48
John Martin	354	23	27
RIO GRANDE			
Elephant Butte	2,195	223	60
El Vado	195	1	100
UPPER COLORADO			
Blue Mesa	830	321	---
Flaming Gorge	3,749	2,562	---
Navajo	1,696	875	---
Powell	25,002	13,112	---
Starvation	152	130	---
LOWER COLORADO			
Havasu	619	548	102
Mead	26,159	17,741	108
Mohave	1,810	1,666	98
Salt River Res. (4)	1,755	944	98
San Carlos	985	125	112
Verde River Res. (2)	318	100	85
GREAT BASIN			
Bear	1,421	1,081	124
Lahontan	286	267	138
Rye Patch	179	179	242
Sevier Bridge	236	173	214
Strawberry	274	198	165
Tahoe	732	521	127
Utah	884	829	148
Willard Bay	193	172	---

BASIN AND NAME OF RESERVOIR	CAPACITY (1,000 A.F.)	STORAGE (1,000 A.F.)	STORAGE PERCENT AVERAGE
UPPER COLUMBIA			
Chelan	676	126	52
Coeur D'Alene	225	248	182
Duncan	1,347	80	---
Flathead	1,791	911	94
Hungry Horse	3,428	1,702	75
Kootenay	673	460	107
Lower Arrow	3,083	155	39
Noxon Rapids	335	295	101
Pend Oreille	1,155	204	40
Roosevelt	5,232	2,736	92
Upper Arrow	4,061	11	1
LOWER COLUMBIA			
Cougar	155	73	---
Detroit	300	179	188
Green Peter	270	169	---
Hills Creek	200	0	0
Lookout Point	337	168	143
Prineville	153	101	103
Wickiup	200	192	108
Yakima Res. (5)	1,066	792	117
SNAKE			
American Falls	1,700	1,276	89
Anderson Ranch	423	225	105
Arrowrock	287	197	78
Brownlee	980	605	170
Cascade	653	291	106
Jackson	847	630	143
Lucky Peak	278	58	55
Owyhee	715	621	151
Palisades	1,200	875	123
Warm Springs	191	138	147
PACIFIC COASTAL			
Clair Engle	2,448	2,117	104
Clear Lake	440	377	148
Nacimiento	350	79	39
Ross	1,203	680	80
Upper Klamath	584	472	112
CALIFORNIA CENTRAL VALLEY			
Almanor	1,036	623	90
Berryessa	1,602	1,399	90
Folsom	1,010	614	102
Isabella	570	117	65
McClure	1,026	564	102
Millerton	521	330	92
New Bullards Bar	930	412	84
Oroville	3,484	2,822	115
Pine Flat	1,013	452	79
Shasta	4,500	3,616	107

Reservoir Storage Data Provided by Bureau of Reclamation , Corps of Engineers, Geological Survey. and water using organizations. Data from California and British Columbia provided by Department of Water Resources and Department of Lands, Forests and Water Resources, respectively.

and but very little below 8,500 feet on the Salt and Gila Watersheds. Compared to average, snow cover varies from 21 percent on the Verde to 58 percent on the Little Colorado.

Salt River Project streams are predicted to yield 35 percent of average flow during the March-May runoff period. Individual stream forecasts vary from a low of 17 percent for the Tonto River to 55 percent for the Gila River at the head of Safford Valley. Water supplies will be adequate this year in all areas served by storage facilities, but reservoir levels are likely to be lower than last year by the end of the season. Water supplies will be somewhat short on the Upper Gila.

GREAT BASIN

Dry weather, coupled with very warm temperatures, not only prevented a normal snowpack build-up on most watersheds of the Great Basin during February, but caused many snow courses-particularly at low elevations and in the southern part of the Basin-to lose water. After the first week of the month temperatures ranged from 3 to as much as 12 degrees above normal. These temperatures have not only caused early runoff from lower elevations, but have caused the higher elevation snows to ripen almost a month earlier than normal.

While this year's near normal to well above normal snowpacks are expected to produce adequate to heavy streamflow this spring, if the present temperature trend continues for some time, the resultant early season runoff will cause streams to fall too rapidly next summer. This could result in some irrigation shortages in late summer and fall months, particularly in southern portions of the Basin.

Most February storms traveled across the northern edge of the Basin, keeping snowpacks here well above average. The snow is 150 to 160 percent average in Oregon's Lake and Harney counties, near 185 percent on northern tributaries of Nevada's Humboldt River. It ranges from about 135 to 180 percent on Utah's watersheds from the vicinity of Utah Lake northward to and including the Bear River and its tributaries in Idaho and Wyoming.

Snowpacks decrease south of the above area, but remain average or above in Utah, near average or above in Nevada and a little below average in the Owens Valley.

Forecast flows for Oregon streams range from 113 percent on the Chewaucan near Paisley to 173 percent on the Silvies River near Burns.

Streams in California's Surprise Valley will flow at 170 to 180 percent. In Nevada the Humboldt and its tributaries are expected to furnish water users with flows ranging from about 130 to 165 percent of average. Anticipated flows from streams originating on the east slope of the Sierra Nevada range near 90 percent of normal, but dropping to a little less than this in the Owens Valley.

In Utah stream forecasts range from a little below average on a few southern streams to over twice normal on some northern streams. Forecasts for most streams range between 120 and 190 percent. Northern streams still have a potential for high peak flows again this year.

Reservoir storage is excellent again this year. In Nevada it is near 150 percent of average for March 1st, and only slightly lower in Utah (143 percent). The elevation of Great Salt Lake is 2.0 feet higher than a year ago and 7.45 feet above the all time record low of October, 1963. Considering the heavy runoff expected from northern Utah streams this year, it is expected that the Lake will continue its rise.

COLUMBIA BASIN

Excellent water supplies are expected for all sections of the Columbia Basin this year. However, extremely heavy snowpacks create a potential for many high water problems unless spring weather produces a long drawn out, slow snowmelt season. If high temperatures occur for an extended period during the main snowmelt period, particularly if they are associated with a rainy period, high water problems can be expected on many watersheds.

Snow accumulation during February was generally well above average in most of the main water producing areas of the Basin. However, on many low elevation watersheds the mild temperatures of the month caused early melt and prevented a normal build-up of the snow. Nevertheless, on watersheds such as the Owyhee, Bruneau, Salmon Falls and other southern tributaries to the Snake River, the snow is still in the range of 170 to over 200 percent of average. In many places the snow exceeds previous record high readings.

Snow cover is near 160 percent of average for the Basin as a whole, in most areas varying between about 130 and 200 percent. Almost every snow course in the Montana portion of the Basin is record high. Record high snow cover was also measured on many watersheds of Washington, Oregon and Idaho. Areas with normal snow to 10 percent above include Idaho's Priest River and Washington's Colville River near the international boundary. The snow is similar to this on the Little Wood and Fish Creek watersheds in southeastern Idaho north of the Snake River. However, the snow in this general area is still about 25 to 35 percent above average.

Heavy snow cover in Canada is particularly significant to the total flow of the Columbia. It ranges from a high of 158 percent on the

east Kootenay, thru 140 percent on the upper Columbia, 134 percent on west Kootenay, to 127 percent on the lower Columbia. While the Kettle River has 125 percent, snow on the Okanogan-Similkameen watersheds is higher, ranging from 150 to 160 percent.

On many streams, the flow is presently expected to reach volumes which have only been exceeded one or two times in the history of the stream record. For example, the forecast for the Kootenai at Libby, Montana is for the highest flow since the record began in 1911. Even the flow of the Columbia at The Dalles, Oregon is forecast to be exceeded only by the giant flow which occurred in 1894. The forecast is for a little more than it was in 1948 and 1956. It should be noted, however, that available reservoir storage is now greater than it was in those years and will be used by management agencies to lower the peak flow. Of course, present streamflow predictions are based on the assumption that weather conditions will be normal during the runoff period.

Most streams in the Basin are expected to yield flows which will be 20 to 50 percent above normal amounts. Forecasts range to as much as twice normal in parts of eastern Oregon and southern Idaho.

Reservoir storage is generally normal or above. However, reservoir managers in many cases are attempting to lower the reservoirs to aid in future flood control. However, in some cases this is presently difficult to do without causing flooding because of the present high uncontrolled inflow to the streams from lower elevations below the reservoirs.

ALASKA

Snowfall from Prince William Sound north to the Brooks Range was extremely light during February. However, the snowpack remains normal or above in most areas.

On the Yukon drainage the snow is near average while on the Porcupine drainage it is slightly below normal. The Tanana River drainage continues with snows that are well above average and high spring flows can be expected within the watershed. Susitna River snow courses showed little, if any, gain over last month's readings, but some remain at record levels. Other Upper Cook Inlet area snow courses are 110 to 130 percent of normal.

Southeast Alaska snow courses also are at record levels with the courses near Juneau currently exceeding any previous March 1 levels during their 7 year history.

CALIFORNIA

The California Department of Water Resources, coordinating agency for snow surveys and water supply forecasting in California, reports that the State's coming spring runoff from snowmelt streams has developed into the general pattern of the past two years. Forecasts of runoff for the April-July period call for near normal runoff from the snowfed streams in the northern half of the State, decreasing to below 50 percent of normal for southern Sierra drainages. Storage in California's major reservoirs is about normal for this time of year. While no critical shortages are foreseen at this time, careful planning of water use will be required, especially if the present dry regime continues. In Southern California, where there has been only one day of measurable precipitation since Christmas, there is apprehension that serious fires might occur under Santa Ana conditions in advance of the normal fire season.

During February, only in the North Coastal area and the northerly portion of the Sacramento Valley was normal or above precipitation experienced. Statewide, precipitation during the month averaged only 55 percent of normal with nearly half the State receiving less than a third of the precipitation normally experienced for February. While the maximum catch reported was 15.05 inches at Crescent City 11E in the North Coastal area, zero amounts were reported from many southern locations. Generally, all areas of the State experienced above normal temperatures during February, reversing the cold regime of January. End-of-the-month storms which produced rain above the 7,500 foot elevation also caused some increase in runoff and boosted snowpack densities.

Storms during February deposited near normal amounts of snow in the southern Cascade Mountains and the northern portion of the Sierra Nevada but, from the Kings River Basin south, there was essentially no accumulation in the snowpack. March 1 measurements from some 200 snow courses, 110 aerial snow depth markers, and 20 reporting snow sensors place the water content of the State's snowpack at 100 percent of normal for this date and 90 percent of the April 1 average.

Forecasts of streamflow for the April-July period which assume subsequent normal precipitation, show that Sacramento and San Joaquin Valley tributaries will be about 90 and 75 percent of their 50-year average, respectively. Unimpaired runoff for the State's major streams during the 1971-72 water year is forecasted to be 90 percent of normal.

Runoff during February was below normal for all major California streams except in the North Coastal and the Lahontan areas. In general, snowfed streams were sustained during the month from early season melt, while runoff from Sacramento and San Joaquin Valley tributaries was only 65 and 50 percent of normal, respectively; Central and South Coastal area streams were only 20 percent of normal. Unimpaired runoff for the State's major streams during the five month period prior to March 1

was 80 percent of their 50-year average for this period.

Based on March 1 storage values for 120 reservoirs, which have a combined usable capacity of 29,694,000 acre-feet, the aggregate storage was 18,184,000 acre-feet. This represents a net decrease of about 1,210,000 acre-feet from that reported one year ago, but normal for this date.

EXPLANATION of STREAMFLOW FORECASTS

All flows are observed flows except as adjusted for: 1/ Storage change in Lake Sherburne. 2/ Storage change in Lima and Clark Canyon reservoirs. 3/ Storage change in Hebgen Lake. 4/ Storage change in Gibson Reservoir and measured diversions. 5/ Storage change in Two Medicine, Four Horns, Lake Francis and Swift reservoirs. 6/ Storage change in Canyon Ferry and Tiber reservoirs. 7/ Changes as indicated in (6/), (87), plus storage change in Fort Peck. 8/ Storage change in Boysen, Buffalo Bill and Yellowtail reservoirs. 9/ Storage change in Buffalo Bill Reservoir plus Heart Mountain diversion. 10/ Storage change in Pilot Butte and Bull Lake reservoirs plus Wyoming canal diversion.

11/ Changes indicated in (10/) plus storage change in Boysen Reservoir. 12/ Plus diversions to Cache LaPoudre. 13/ Plus by-pass to power plants. 14/ Minus diversion thru Gumlick Tunnel. 15/ Storage change in Price Reservoir. 16/ Minus diversions from North Platte, Laramie and Colorado rivers plus measured diversions above station. 17/ Storage change in Clear Creek, Twin Lakes and Turquoise reservoirs minus diversions from Colorado River. 18/ Storage change in Rio Grande, Santa Maria and Continental reservoirs. 19/ Storage change in El Vado and Abiquiu reservoirs. 20/ Storage change in Platoro Reservoir.

21/ Storage change in Grandby Reservoir as furnished by U.S.B.R. plus diversions by Adams Tunnel and Grand River Ditch. 22/ Changes as indicated in (21/) plus diversions thru Roberts, Gumlick and Moffat tunnels and storage change in Dillon, Homestake, Williams Fork, Green Mountain and Willow Creek reservoirs. 23/ Changes indicated in (22/) and (26/). 24/ Storage change in Blue Mesa Reservoir. 25/ Changes indicated in (24/), (30/) and (35/) and storage change in Lake Powell. 26/ Diversions to Arkansas River plus storage change in Ruedi Reservoir. 27/ (Inflow record as computed by U. S. Bureau of Reclamation.) 28/ Storage change in Taylor, Blue Mesa and Morrow Point reservoirs. 29/ Storage change in Fontenelle Reservoir. 30/ Storage change in Flaming Gorge Reservoir.

31/ Plus diversion through Duchesne Tunnel. 32/ Storage change in Moon Lake Reservoir. 33/ Storage change in Scofield Reservoir. 34/ Storage change in Joe's Valley Reservoir. 35/ Storage change in Navajo Reservoir. 36/ Plus U. P. & L. Co. tailrace and Logan, Hyde Park and Smithfield canals. 37/ Minus diversions thru Duchesne Tunnel and Weber-Provo Canal. 38/ Storage change in Lake Tahoe and Boca reservoirs (Forecast by Truckee Basin Committee.) 39/ Storage change in Bridgeport Reservoir. 40/ Corrected for major upstream impairments -- represents simulated natural flow conditions.

41/ Storage change in Priest Lake. 42/ Storage change in Coeur d'Alene Lake and diversions by Spokane Valley Farms Co. and Rathrum Prairie canals. 43/ Storage change in Lake Chelan. 44/ Storage change in Jackson Lake. 45/ Storage change in Jackson Lake and Palisade reservoirs. 46/ Storage change in Jackson Lake, Palisades, Island Park, Henry's Lake, Grassy Lake plus diversions between Heise and Blackfoot. 47/ Storage change in Henry's Lake and Island Park reservoirs. 48/ Storage change in MacKay Reservoir and diversion in Sharp Ditch. 49/ Combined flow Big Wood near Bellevue and Camas Creek near Blaine. 50/ Storage change in Arrowrock, Anderson Ranch and Lucky Peak reservoirs.

51/ Storage change in Wild Horse Reservoir. 52/ Storage change in Cascade and Deadwood reservoirs. 53/ Storage change in Keechelus, Kachess and CleElum reservoirs plus diversion by Kittitas Canal. 54/ Changes indicated in (52/) plus storage change in Bumping and Rimrock Lakes plus diversion by Roza, Union Gap, New Reservation, Old Reservation and Sunrise canals. 55/ Storage change in Bumping and Rimrock lakes and diversions by Tieton, Selah Valley, Wapatox canals and City of Yakima. 56/ Storage change in Merwin, Yale and Swift reservoirs. 57/ Storage change in Mayfield Reservoir.

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